

WHAT IS CLAIMED IS:

1. A light emitting device comprising:
 - a resin portion having an opening, said opening having an approximately elliptical or elongate-circular opening shape;
 - a first semiconductor light emitting element disposed inside said opening;
 - a semiconductor element disposed inside said opening;
 - and
 - a silicone resin provided inside said opening to enclose said first semiconductor light emitting element and said semiconductor element, said silicone resin having a hardness not lower than 50 in JISA value.
2. A light emitting device according to claim 1, further comprising a wire connected to said semiconductor light emitting element,
 - wherein said silicone resin is provided to enclose said wire as well.
3. A light emitting device comprising:
 - a lead;
 - a resin portion embedding at least a part of said lead;
 - a first semiconductor light emitting element mounted on said lead in an opening formed in said resin portion;
 - a semiconductor element mounted on said lead in said opening;
 - a wire connecting said first semiconductor light emitting element and said lead; and
 - a silicone resin provided in said opening to enclose said first semiconductor light emitting element and said semiconductor element, said silicone resin having a hardness not lower than 50 in JISA value,
 - said lead having a slit formed therein between a portion where said first semiconductor light emitting element is mounted and a portion where said wire is connected.

4. A light emitting device comprising:

a first lead;

a second lead;

a resin portion embedding at least a part of said first and second leads;

a first semiconductor light emitting element mounted on said first lead in an opening formed in said resin portion;

a semiconductor element mounted on said second lead in said opening;

a first wire connecting said first semiconductor light emitting element and said second lead;

a second wire connecting said semiconductor element and said first lead; and

a silicone resin provided in said opening to enclose said first semiconductor light emitting element and said semiconductor element, said silicone resin having a hardness not lower than 50 in JISA value,

said first lead having a first slit formed therein between a portion where said first semiconductor light emitting element is mounted and a portion where said second wire is connected,

said second lead having a second slit formed therein between a portion where said semiconductor element is mounted and a portion where said first wire is connected.

5. A light emitting device according to claim 3 or 4 wherein said opening has a substantially elliptical or elongate-circular opening shape.

6. A light emitting device comprising:

a first lead;

a second lead;

a resin portion embedding at least a part of said first and second leads;

a first semiconductor light emitting element mounted on said first lead in an opening formed in said resin portion;

a semiconductor element mounted on said first lead in said opening;

a first wire connecting said first semiconductor light emitting element and said second lead;

a second wire connecting said semiconductor element and said second lead; and

a silicone resin provided in said opening to enclose said first semiconductor light emitting element and said semiconductor element, said silicone resin having a hardness not lower than 50 in JISA value,

said opening having a substantially elliptical or elongate-circular opening shape,

said first semiconductor light emitting element and said semiconductor element being arranged along a longer axis or a shorter axis of said elliptical or elongate-circular opening.

7. A light emitting device according to claim 6, further comprising a third wire connecting said first semiconductor light emitting element and said first lead,

wherein said first lead having a slit formed therein between a portion where said first semiconductor light emitting element is mounted and a portion where said third wire is connected.

8. A light emitting device according to claim 3, wherein said first semiconductor light emitting element is placed in a center of said opening.

9. A light emitting device according to claim 3, wherein said silicone resin is provided to enclose said wire as well.

10. A light emitting device according to claim 1, wherein said semiconductor element is a second semiconductor light emitting element.

11. A light emitting device according to claim 10, wherein

said first semiconductor light emitting element and said second semiconductor light emitting element are different in peak wavelength of light they emit.

12. A light emitting device comprising:

a semiconductor element;

a first semiconductor light emitting element mounted on said semiconductor element by a metal bump;

a silicone resin provided to enclose said semiconductor element and said first semiconductor light emitting element, said silicone resin having a hardness not lower than 50 in JISA value.

13. A light emitting device according to claim 12, further comprising a resin portion having an opening,

wherein said semiconductor element and said first semiconductor light emitting element are placed in a center of said opening.

14. A light emitting device according to claim 12, further comprising a wire connected to said semiconductor element,

wherein said silicone resin is provided to enclose said wire as well.

15. A light emitting device according to claim 12, wherein said semiconductor element is a protective diode connected in parallel with said first semiconductor light emitting element.

16. A light emitting device according to claim 1, further comprising a fluorescent element which is included in said silicone resin, absorbs light emitted from said first semiconductor light emitting element and releases light of a peak wavelength different from said light from said first semiconductor light emitting element.

17. A light emitting device according to claim 1, wherein said silicone resin has a pre-curing viscosity in the range not lower than 100cp and not higher than 10000cp.

18. A light emitting device according to claim 1 wherein said silicone resin has a convex surface configuration.

19. A light emitting device comprising:
a semiconductor light emitting element;
a silicone resin provided to enclose said semiconductor light emitting element, said silicone resin having a hardness not lower than 50 in JISA value; and
a fluorescent element which is included in said silicone resin, absorbs light emitted from said semiconductor light emitting element and releases light of a peak wavelength different from said light from said semiconductor light emitting element..

20. A light emitting device according to claim 1, wherein said silicone resin has a hardness not higher than 90 in JISA value.